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10/821,354	04/08/2004	Steven V. Luong	CISCP368/8538	1205
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BEYER WEAVER LLP			CHURNET, DARGAYE H	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/821,354	Applicant(s) LUONG ET AL.	
	Examiner Dargaye H. Churnet	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-14, 21-38, 40-42, 45, 47, 49-51, 54, 56-65 and 68 is/are rejected.
- 7) ☒ Claim(s) 4-9, 15-20, 39, 43, 44, 46, 48, 52, 53, 55, 66, 67 and 69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/13/04</u> | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Claim Objections

1. Claims 3, 14, 23, 42, 51, and 60 are objected to under 37 C.F.R 1.75 because of the following formalities:

For claim 3, lines 2 and 3, the term "IS-IS protocol" is unclear. It is suggested to change "IS-IS protocol" to ---Intermediate System to Intermediate System protocol---

Claims 14, 23, 42, 51, and 60 are objected to for similar reasons.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 31, and 33-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 11, line 1, the term "the purging conditions" has no antecedent basis. There are no purging conditions disclosed in the claim from which it depends. Claim 31 is rejected for similar reasons.

For claim 33, lines 2-3, the term "the first node back to the second node" has no antecedent basis. There is no first node or second node disclosed in the claim from which it depends.

Claims 34-37 are rejected as being dependent on a rejected base claim.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-31 and 56-64 are rejected under 35 U.S.C. 101 because they describe a computer program per se. The computer program products recited in claims 21-31 and 56-64 are rejected because it is non-statutory subject matter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10,

Claims 1-3, 13, 14, 21-23, 30, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Soloway et al. (cited 5,265,092).

For claim 1, Soloway et al. disclose a method for handling Link State Packets (LSPs) sent between processing nodes within a computer network, the method comprising: at a first node, receiving an LSP sent by a second node, wherein the LSP specifies connectivity information regarding the second node (see col. 21, lines 47-49,

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wherein a Ready Announcement is interpreted as the LSP and is sent from an LSP originator to a receiving switch); determining whether the received LSP is and updated LSP even when the received LSP is considered older than another LSP previously sent by the second node to the first node (see col. 22, lines 32-45, wherein it is determined if the Ready Announcement is updated, regardless of the sending date, which is determined by comparing local sequence numbers); and if it is determined that the received LSP is and updated LSP, performing updating procedures on LSP information that is maintained by the first node, wherein the LSP information was obtained from one or more LSPs sent by the second node (see col. 22, lines 46-56, wherein LSP information is updated in the LSP database at the receiving switch). Claim 12 is rejected for similar reasons, wherein a switch is the first apparatus, which inherently has a processor and memory. Claims 21 and 32 are rejected for similar reasons.

For claim 2, Soloway et al. disclose the received LSP is in a format which complies with a link state type routing protocol (see col. 6, lines 34-36, wherein the LSP complies with link state type routing protocols) and the LSP is considered older than another LSP based on one or more rules of the link state type routing protocol (see col. 22, lines 32-45, wherein an LSP is considered older if it has a smaller sequence number). Claims 13 and 22 rejected for similar reasons.

For claim 3, Soloway et al. disclose the received LSP is in a format which complies with the IS-IS Protocol (see col. 6, lines 3-4, which refers to col. 1, lines 34-43)

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and the LSP is considered older than another LSP based on one or more rules of the IS-IS protocol (see col. 22, lines 32-45, wherein an LSP is considered older if it has a smaller sequence number). Claims 14 and 23 rejected for similar reasons.

For claim 10, Soloway et al. disclose the LSP information is updated only if one or more purging conditions are met that minimize security problems (see col. 22, lines 46-56, wherein LSP information is updated in the LSP database at the receiving switch, and wherein the term "purging conditions" is vague and interpreted as the sequence number being higher than a previously stored sequence number). Claim 30 is rejected for similar reasons.

5. Claims 38, 40-42, 47, 49-51, 56, 58-60, and 65 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (cited Intermediate System to Intermediate System (IS-IS) Cryptographic Authentication).

For claim 38, Li et al. disclose at a first node, receiving an LSP sent by a second node, wherein the LSP specifies connectivity information regarding the second node (see p. 3, paragraph 2.1, lines 11-12, wherein an inbound LSP is received at one node from another); if the received LSP fails authentication and the received LSP is considered newer than a stored LSP that was last previously stored for the second node by the first node, purging LSP information regarding the second node that is being maintained by the first node (see p. 3, paragraph 2.1, lines 11-16, wherein the received LSP is considered newer and fails authentication, so the LSP sequence number is

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updated, which inherently includes purging previous LSP sequence number information); and if the received LSP fails authentication and the received LSP is considered newer than a stored LSP that was last previously stored for the second node by the first node, flooding a second LSP from the first node to the first node's neighbor nodes, wherein the second LSP is structured to cause a purging of LSP information regarding the second node that is being maintained by the neighbor nodes (see p. 3, paragraph 2.1, lines 11-16, wherein the received LSP is considered newer and fails authentication, so the LSP is flooded to neighbor nodes, where the neighbor nodes will inherently update the LSP information by purging previous LSP information). Claim 47 is rejected for similar reasons, wherein a router is the first apparatus, which inherently has a processor and memory. Claims 56 and 65 are rejected for similar reasons.

For claim 40, Li et al. disclose the second node is being attacked (see p. 3, paragraph 2.1, lines 16-17, wherein the method is triggered by an active attack). Claims 49 and 58 are rejected for similar reasons.

For claim 41, Li et al. disclose the received LSP is in a format which complies with a link state type routing protocol (see p. 1, Introduction paragraph, lines 1-3, wherein the LSPs comply with a link state type routing protocol). Claims 50 and 59 are rejected for similar reasons.

For claim 42, Li et al. disclose the received LSP is in a format which complies with the IS-IS Protocol (see p. 1, Introduction paragraph, lines 1-3, wherein the LSPs comply with the IS-IS protocol). Claims 51 and 60 are rejected for similar reasons.

Claim Rejections - 35 USC § 103

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45, 54, 63, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. in view of Fukushima et al. (cited 6,049,524).

For claim 45, Li et al. fail to disclose updating the first node's routing tables based on the LSP information maintained by the first node after the LSP information regarding the second node has been purged. Fukushima et al. from the same or similar fields of endeavor teach updating the first node's routing tables based on the LSP information maintained by the first node after the LSP information regarding the second node has been purged (see fig. 12 and 13, particularly blocks 161 and 172, wherein the router receives updated link state information and updates its routing table, which inherently includes purging previously stored data that is being updated). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Fukushima et al. in the network of Li et al. The method taught by Fukushima et al. is modified/implemented into the network of Li et al. by updating a routing table with current LSP information. The motivation for updating the first node's routing tables based on the LSP information maintained by the first node after the LSP information regarding the second node has been purged is that

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both inventions describe updating a router with link state information. Claims 54, 63, and 68 are rejected for similar reasons.

Allowable Subject Matter

9. Claims 4-9, 15-20, 39, 43, 44, 46, 48, 52, 53, 55, 66, 67, and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 33-37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references include Perlman et al. (cited 5,128,926) and Burchfiel et al. (cited 6,944,127 B1), which both describe LSP routing.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dargaye H. Churnet whose telephone number is 571-270-1417. The examiner can normally be reached on Monday-Friday from 7:30-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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